5

10

15

20

25



A TSSI monitoring device for monitoring a correct time slot sequence in a time/space switching network for a time or space allocation of data channels to be switched, comprising:

a TSSI insertion mechanism for inserting a TSSI monitoring value into a predetermined data channel of successive frames to be switched, wherein said TSSI monitoring value for each frame is incremented or decremented by a predetermined value; and

a difference forming mechanism for forming a difference of data contents of said predetermined data channel for immediately successive frames to be switched by said time/space switching network, wherein said difference is equal to said predetermined value for a correct time slot sequence.

- 2. The TSSI monitoring device according to claim 1, further comprising an error counter for counting TSSI errors for a lack of agreement between said formed difference and said predetermined value.
- The TSSI monitoring device according to claim 1, wherein said predetermined value is equal to 1 and is derived from a counter.

4. The TSSI monitoring device according to claim 1, wherein said difference forming mechanism comprises:

a delay for delaying a predetermined data channel to be switched by one frame;

a subtractor for determining a subtraction result from a data content of a delayed data channel and a data content of an undelayed data channel; and

a comparator unit for comparing said subtraction result with said predetermined value.

30

10

15

20

25

30



- 5. The TSSI monitoring device according to claim 4, wherein said delay comprises at least one speech memory of said time/space switching network.
- 6. The TSSI monitoring device according to claim 1, wherein said TSSI insertion mechanism comprises a plurality of TSSI insertion units that are respectively allocated to an input switching network line.
 - 7. The TSSI monitoring device according to claim 1, wherein said difference forming mechanism comprises a plurality of difference forming units that are respectively allocated to two output switching network lines.
 - 8. The TSSI monitoring device according to claim 2, wherein said error counter comprises a plurality of error counting units that are respectively allocated to a difference forming unit.
 - 9. The TSSI monitoring device according to claim 1, wherein said TSSI insertion mechanism is fashioned in an equalizer for producing a plurality of synchronous frames from non-synchronous frames.
 - 10. The TSSI monitoring device according to claim 1, wherein said predetermined data channel to be switched represents a test channel.
 - A method for monitoring a correct time slot sequence in a time/space switching network for a time or space allocation of data channels to be switched, comprising the steps of:

inserting a TSSI monitoring value into a predetermined data channel of successive frames to be switched, wherein said TSSI monitoring value for each frame is incremented or decremented by a predetermined value;

time or space allocating said data channels to be switched in said time/space switching network;

15





forming a difference of data contents of said data channel to be switched by said time/space switching network for immediately successive frames; and outputting an error value when said difference is not equal to said predetermined value.

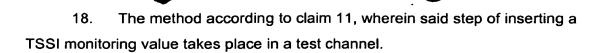
5

- 12. The method according to claim 11, further comprising the step of: incrementing an error counter dependent on said output error value.
- 13. The method according to claim 11, wherein said TSSI monitoring value10 is incremented by a predetermined value derived from a counter.
 - 14. The method according to claim 11, wherein said step of forming a difference of data contents of said data channel comprises the steps of: delaying said predetermined data channel to be switched by one frame; determining a subtraction result from a data content of said delayed data channel and a data content of an undelayed data channel; and comparing said identified subtraction result to said predetermined value.
- The method according to patent claim 14, wherein said step of
 delaying said predetermined data channel is implemented in a speech memory of said time/space switching network.
 - 16. The method according to claim 11, wherein said step of inserting a TSSI monitoring value is implemented for a plurality of input switching network lines.

25

17. The method according to claim 11, wherein said step of forming a difference of data contents of said data channel is implemented for a plurality of respectively two output switching network lines.

30



19. The method according to claim 13 wherein said predetermined value is5 one.